

REMARKS

I. Introduction

Applicants acknowledge receipt of a final Office Action dated April 21, 2009.

In this Office Action, the claims are rejected as allegedly anticipated by WO 02/14423 (Kuraray), (claims 1-4 and 6, 7 and 10-13), obvious over Kuraray (claims 9 and 10), obvious over Kuraray in view of JP 2001-26663 (Sanwa), (claims 1-4, 6-7 and 9-12) or obvious over Kuraray and Sanwa in view of EP 1229076 (Mitsui Chemicals, Inc.), (claims 8 and 9).

II. Status of Claims

In this response, the phrase “0-1900 parts by weight of an ethylene/polar monomer copolymer (A2)” in claims 1, 2 and 9 has been amended to read “5-1900 parts by weight of an ethylene/polar monomer copolymer (A2)”.

Support for this amendment can be found throughout the specification and in particular on page 16, lines 18-23 of the specification as originally filed. Thus, no new matter has been added. Upon entry of this amendment, claims 1- 4 and 6-13 will be under examination.

III. Claim Rejections - 35 USC § 102

Claims 1-4, 6-7, 10-13 are rejected under 35 U.S.C. 102 (b) as allegedly anticipated by WO 02/14423 to Kuraray Co.

In particular, the Office states that “[Kuraray] expressly discloses the newly added limitation to the block copolymer being at least triblock os [sic] hydrogenated or non-hydrogenated S-B-S type.” See current Office Action at page 2. Furthermore, the Office states that Kuraray’s teaching of a metallocene ethylene-1-butene copolymer, a styrene based block copolymer (e.g., SEPTONS) along with a blowing agent (see entire specification and specifically example 22), anticipates the presently claimed resin composition for a foamed product. Office Action dated September 10, 2008 at page 2. Applicants respectfully disagree.

Kuraray discloses a polymer composition obtained by subjecting a cross-linkable polymer to dynamic cross-linking. See WO 02/14423 abstract. Specifically, Kuraray teaches a cross-linked polymer composition comprising:

- (a) a block copolymer comprising two or more polymer blocks A of a vinyl aromatic compound and one or more polymer blocks B of a conjugated diene, the polymer block B being either hydrogenated or unhydrogenated;
- (b) an olefin copolymer having a density of 0.88 to 0.92g/cm³ and obtained through copolymerization of ethylene and an α -olefin having 4 to 12 carbon atoms;
- (c) a softening agent; and
- (d) an organic peroxide

in respective specific amounts (claim 1).

However, Kuraray does not teach a resin composition for a foamed product that comprises an ethylene/ α -olefin copolymer (A1), a styrene block copolymer (B), and an ethylene/polar monomer copolymer(A2), which is a non-crosslinked, unfoamed copolymer obtained by melt plasticizing as recited by claim 1. Furthermore, Kuraray does not teach the resin composition of pending claim 2.

In fact, the specification and working examples of Kuraray teach a composition obtained by dynamic cross-linking of polymer units, and not a non-crosslinked composition. Furthermore, Kuraray's disclosed composition does not include an ethylene/polar monomer copolymer as recited by the claims, much less suggest a resin composition that has this component in the recited range.

Therefore, for at least these reasons, claims 1 and 2 are not anticipated by Kuraray. And because claims 3, 4, 6-7 and 10-13 depend from claims 1 or 2 respectively, and incorporate all the limitations of their respective base claims, these claims are also not anticipated by Kuraray.

Applicants respectfully request that the § 102 rejection be withdrawn.

IV. Claim Rejections - 35 USC § 102/103

Claim 9 is rejected under 35 U.S.C. 102 (b) as allegedly anticipated by, or obvious over Kuraray.

Specifically, the Office believes that “since the [disclosed] compositions are substantially identical to the claimed compositions, contain high amounts of crosslinking agent (alone or in combination with crosslinking aid), and are processed at temperatures well above the activation temperature of the crosslinking agent, it is reasonable to believe that the foamed processed compositions inherently exhibit the claimed gel fraction” (claim 9). Office Action dated September 10, 2008, at page 4, lines 7-12. Applicants respectfully disagree.

Claim 9 recites a foamed product that comprises an ethylene/α-olefin copolymer (A1), a styrene block copolymer (B), an ethylene/polar monomer copolymer(A2), and has a gel content of 70% or more and a specific gravity of 0.6 or less.

As stated above, Kuraray does not suggest a foamed product that includes an ethylene/polar monomer copolymer(A2), as claimed. Kuraray therefore does not anticipate the inventive foamed product. Furthermore, as exemplified in the working examples of the specification as filed, the claimed foamed product, which comprises the specific styrene block copolymers (B) recited in present claim 9, also possesses low specific gravity and low compression set, excelling in tensile strength and tear strength as well as in impact resilience, and exhibiting less of a decrease in hardness at high temperatures. Each of these features is not inherent in, or obvious in light of the compositions disclosed in the cited reference.

Thus, Applicants submit that the product recited in present claim 9 is not obvious in view of Kuraray and Applicants respectfully request that this rejection be withdrawn.

V. Claim Rejections - 35 USC § 103

(i) Claim 10 is rejected as allegedly obvious over Kuraray.

Specifically, the Office believes that because Kuraray discloses “suitability of the foamed composition for show [sic] soles, and also discloses adhesive attachment of the sole to the bottom of the footgear, this embodiment makes the claimed laminates at least obvious”. Office Action dated September 10, 2008, at page 4. Applicants respectfully traverse this ground for rejection.

Kuraray teaches a foam product that is different from the product of claim 10. This is so, because Kuraray does not teach or suggest a resin composition that has an ethylene/polar monomer copolymer as claimed. Thus, even if one of skill in the art combined Kuraray’s foam product with a base as recited in claim 10, the resultant laminate would be different from the laminate of claim 10. Therefore, for at least these reasons, Applicants respectfully request that this rejection be withdrawn.

(ii) Claims 1-4, 6-7, and 9-12 are allegedly obvious over JP 2001-26663 to Sanwa Kako K.K., (“Sanwa”).

The Office alleges that Sanwa “expressly discloses a styrene/isoprene/styrene block polymer, and expressly addresses the point why it is better to use vinyl-polyisoprene in place of polybutadiene as the block in the styrene based polymers.” Office Action at page 3. The Office also states that according to Sanwa, “crosslinking takes place more easily, hardening occurs faster and elongation is less when butadiene is used instead of isoprene as the middle block.” *Id* at page 3. Thus, the Office concludes that it be obvious for a skilled person to use a SBS copolymer where the benefits of the styrene/isoprene/styrene block copolymer are not desired or needed (such as crosslinking), and the presently claimed resin composition and foam product resulting from such a composition is obvious in view of Sanwa. *Id.* at page 3. Applicants respectfully traverse this ground for rejection.

First, Sanwa discloses a damping resin foam that consists of a base comprising a mixture of (i) a copolymer of ethylene and α -olefin having 3 to 18 carbon atoms, and (ii) a

tri-block copolymer of polystyrene and vinyl-polyisoprene. Sanwa, however, fails to disclose a resin composition for a foamed product comprising an ethylene/α-olefin copolymer (A1), a styrene/butadiene/styrene or a styrene/ethylene/butane/styrene block copolymer (B), and an ethylene/polar monomer copolymer (A2) in a specific ratio, as recited in present claims 1 and 2.

Second, the Office has provided no rationale for stating that substituting butadiene would be an obvious choice for isoprene in the tri-block copolymer of Sanwa. In fact, it appears that the Office is using hind-sight reconstruction to arrive at the presently claimed invention which is impermissible. For example, there is not teaching in Sanwa that butadiene could be used in place of vinyl polyisoprene in the disclosed tri-block polymer. In fact, one of ordinary skill in the art would understand Sanwa to use a vinyl polyisoprene tri-block polymer to maintain the advantages of the disclosed damping resin. See abstract of the Sanwa reference.

Third, Sanwa is silent about a resin composition that has an ethylene/polar monomer copolymer as claimed. Thus, even if isoprene was replaced by butadiene in the Sanwa's tri-block polymer component as suggested by the Office, such a modification would still fail to arrive at the presently claimed resin composition, because Sanwa's composition lacks the ethylene/polar monomer component (A2) of the presently claimed resin composition.

For at least the foregoing reasons, the obviousness rejection should be withdrawn.

(iii) Claims 8 and 9 are allegedly obvious over the teachings of Kuraray and Sanwa in combination with EP 1229076 to Mitsui Chemicals, Inc., ("Mitsui").

Specifically, the Office states that "the references [Kuraray and Sanwa] do not disclose processing the foams into a final product via secondary compression of the foams." Office Action dated September 10, 2008, at page 5. According to the Office, "the Mitsui reference expressly discloses secondary compressing of foams...." and "it would have been obvious to form the foamed compositions disclosed by either Kuraray or Sanwa into final products via secondary compression with reasonable expectation of success, since this step is

a known step in producing final products from crosslinked polyolefin based foams. Office Action dated September 10, 2008, at pages 5-6. Applicants respectfully disagree.

As discussed above, Kuraray does not disclose the presently claimed resin composition and Sanwa does not remedy the defects of Kuraray. A person of ordinary skill in the art would fail to arrive at the claimed composition or the foam product of such a composition based on the teachings of Kuraray and Sanwa. Furthermore, the '076 reference does not remedy the defects of the Kuraray and Sanwa references. Thus, even if secondary compression as taught by the '076 patent is used with the foam product of the Kuraray and Sanwa references, the resultant foam would be different from that recited in claims 8 and 9.

More specifically, the presently claimed resin composition provides a foamed product having low specific gravity, low compression set (CS), high tensile strength, superior tear strength properties, impact resilience, and decreased hardness at high temperatures. See page 4, lines 9-16 of the specification as filed. None of the cited prior art references, however, teach or suggest a composition that provides a foam product having comparable properties.

Accordingly, claims 8 and 9 are not obvious over the combined teachings of Kuraray, Sanwa and EP 1229076 and therefore Applicants respectfully request that these rejections be withdrawn.

CONCLUSION

Applicants believe that the present application is in condition for allowance and request an early indication in this regard. The Examiner is invited to contact the undersigned attorney if any issues that warrant further discussion remain.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, then the Commissioner is authorized to charge the unpaid amount to the same deposit account. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to the deposit account.

Date July 20, 2009

FOLEY & LARDNER LLP
Customer Number: 22428
Telephone: (202) 672-5490
Facsimile: (202) 672-5399

Respectfully submitted,

By _____

Michael D. Kaminski
Attorney for Applicants
Registration No. 32,904

1055,60)